

Title (en)  
PROCESS FOR THE MANUFACTURE OF CARBOXYLIC ANHYDRIDE

Title (de)  
VERFAHREN ZUR HERSTELLUNG VON CARBONSÄUREANHYDRID

Title (fr)  
PROCÉDÉ POUR LA FABRICATION D'ANHYDRIDE CARBOXYLIQUE

Publication  
**EP 3227257 B1 20211027 (EN)**

Application  
**EP 15802116 A 20151201**

Priority  
• EP 14195884 A 20141202  
• EP 2015078160 W 20151201

Abstract (en)  
[origin: WO2016087419A1] The present invention concerns a process for manufacturing a fraction comprising carboxylic acid anhydride by reaction of a fraction comprising carboxylic acid with a ketene, and the use of the fraction comprising carboxylic acid anhydride in a process for acylation of polysaccharides.

IPC 8 full level  
**C07C 51/56** (2006.01); **C07C 53/12** (2006.01)

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Citation (examination)  
WO 2016009060 A1 20160121 - TRICOYA TECHNOLOGIES LTD [GB] & EP 3169456 B1 20180801 - TRICOYA TECH LTD [GB]

Citation (opposition)  
Opponent : Titan Wood Ltd.  
• WO 2009120257 A1 20091001 - CELANESE INT CORP [US], et al  
• WO 2009114070 A1 20090917 - CELANESE INT CORP [US], et al  
• EP 0213252 A1 19870311 - ROWELL ROGER M [US], et al  
• EP 2975016 A1 20160120 - TRICOYA TECHNOLOGIES LTD [GB]  
• US 2009275777 A1 20091105 - FORNARA WOUT [NL], et al  
• US 2012323039 A1 20121220 - JANKA MESFIN EJERSSA [US], et al  
• HELD H, ET AL: "ACETIC ANHYDRIDE AND MIXED FATTY ACID ANHYDRIDES", ULLMANN'S ENCYCLOPEDIA OF INDUSTRIAL CHEMISTRY, 1 January 2012 (2012-01-01), pages 239 - 256, XP055950489

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**EP 2015078160 W 20151201**; BR 112017011533 A 20151201; CA 2967146 A 20151201; CL 2017001383 A 20170530; CN 201580065922 A 20151201; EP 15802116 A 20151201; NZ 73182215 A 20151201; RU 2017123052 A 20151201; US 201515532306 A 20151201; ZA 201703243 A 20170510